

## **METHOD AND APPARATUS FOR CORRECTING CROSSTALK AND SPATIAL RESOLUTION FOR MULTICHANNEL IMAGING**

### **Abstract of the Disclosure**

5 A multichannel imaging system generates an ensemble of images for each  
field of view of an object. Each image in the ensemble is intended to contain  
information from only one source among a plurality of sources for the object.  
However, due to crosstalk, at least a portion of the signal from a first source appears  
in a channel intended for a second source. Because the accuracy of the correction  
will be degraded if the images in an ensemble are spatially misaligned with respect to  
10 one another, the spatial offset between images is determined and a correction is  
applied to substantially eliminate the offset. Then, a correction to the signals is  
determined to substantially reduce the contributions to the signal in a channel from  
the signals in other channels. The signal processing can be employed to process the  
output signals for each of a plurality of different disclosed imaging systems.